

APPROVED  
BY  
DRAFTSMAN

O.C. FIG. 6  
CLASSE SUBCLASSE  
710 110

Express Mail No. ELS99912565US  
Application No. REI of 5,996,036  
Title: BUS TRANSACTION REORDERING IN A COMPUTER  
SYSTEM HAVING UNORDERED SLAVES  
Inventors: James D. Kelly *et al.*  
Atty. Docket No.: 18602-06222  
Sheet 1 of 21

RE38428

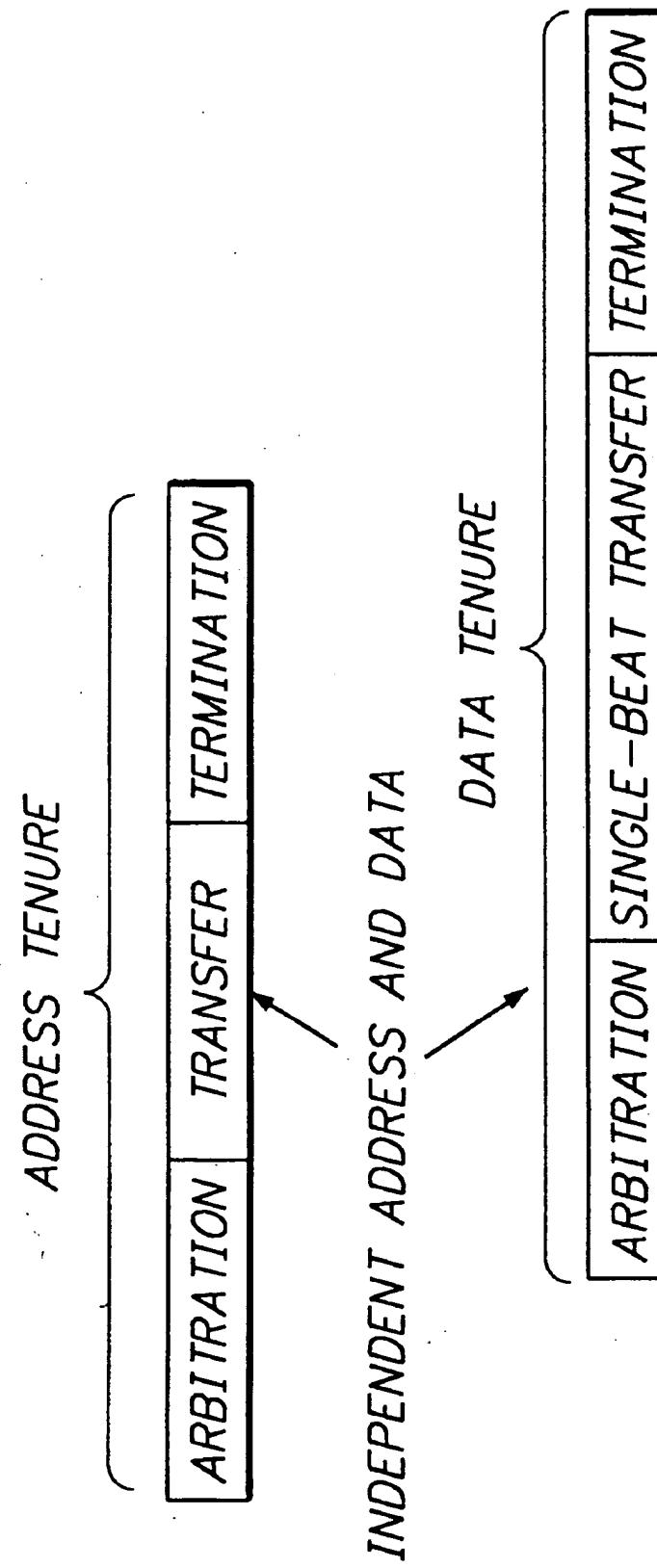


FIG. 1

APPROVED	O.G. FIG.
BY	CLAS& SUBCLAS
DRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A COMPUTER  
 SYSTEM HAVING UNORDERED SLAVES  
 Inventors: James D. Kelly *et al.*  
 Atty. Docket No.: 18602-06222  
 Sheet 2 of 21

"DOCUMENT = FIGURE 2"

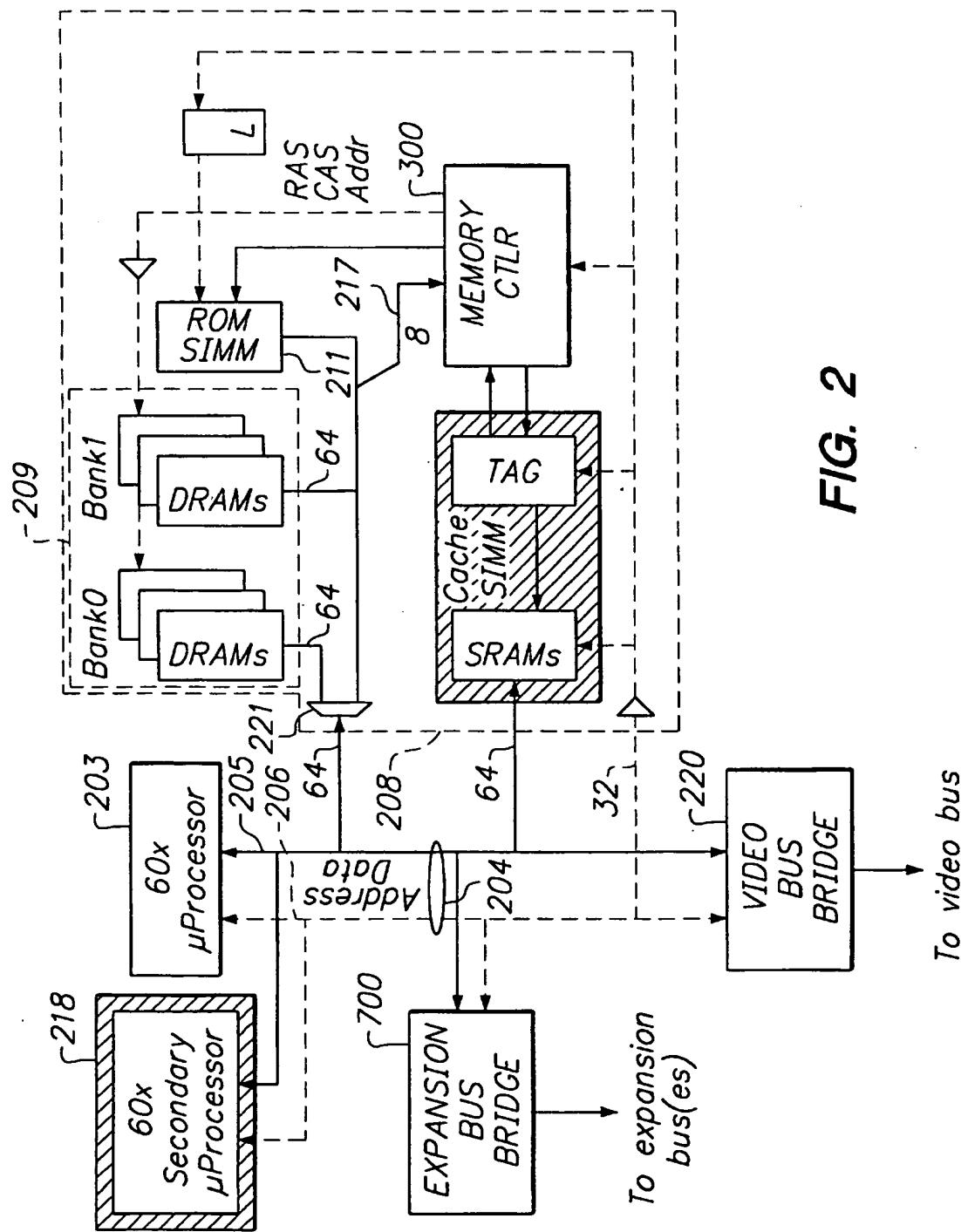


FIG. 2

APPROVED  
BY  
DRAFTSMAN

O.G. FIG.  
CLAS# SURCLAS#

Express Mail No. EL599912565US  
Application No. RE1 of 5,996,036  
Title: BUS TRANSACTION REORDERING IN A  
COMPUTER SYSTEM HAVING UNORDERED  
SLAVES  
Inventors: James D. Kelly et al.  
Atty. Docket No.: 18602-06222  
Sheet 3 of 21

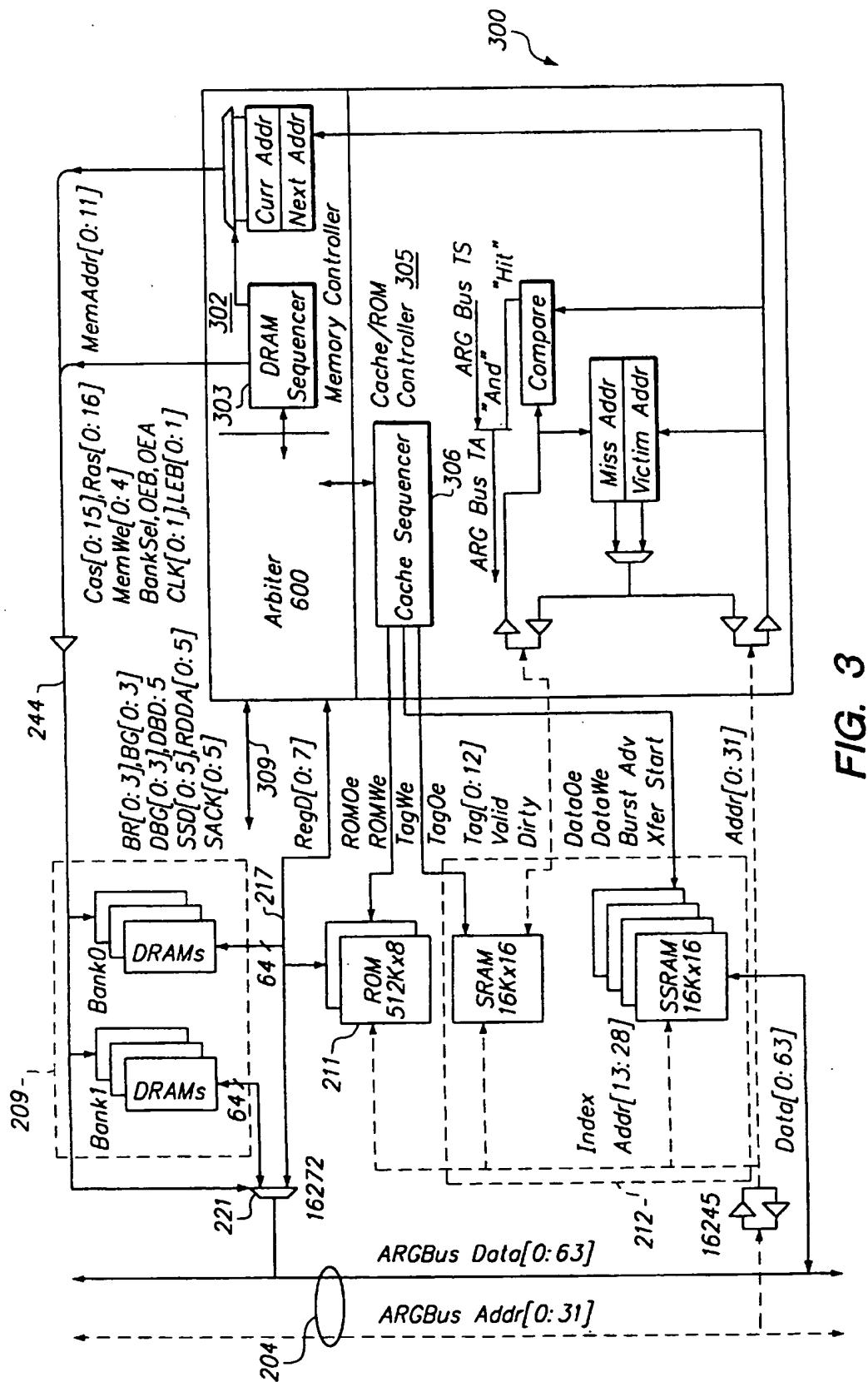


FIG. 3

APPROVED	O.G. FIG.
BY	CLASSE
DRAFTSMAN	SUBCLASSE

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A COMPUTER  
 SYSTEM HAVING UNORDERED SLAVES  
 Inventors: James D. Kelly et al.  
 Atty. Docket No.: 18602-06222  
 Sheet 4 of 21

FIGURE 4 - FIGURE FOUR

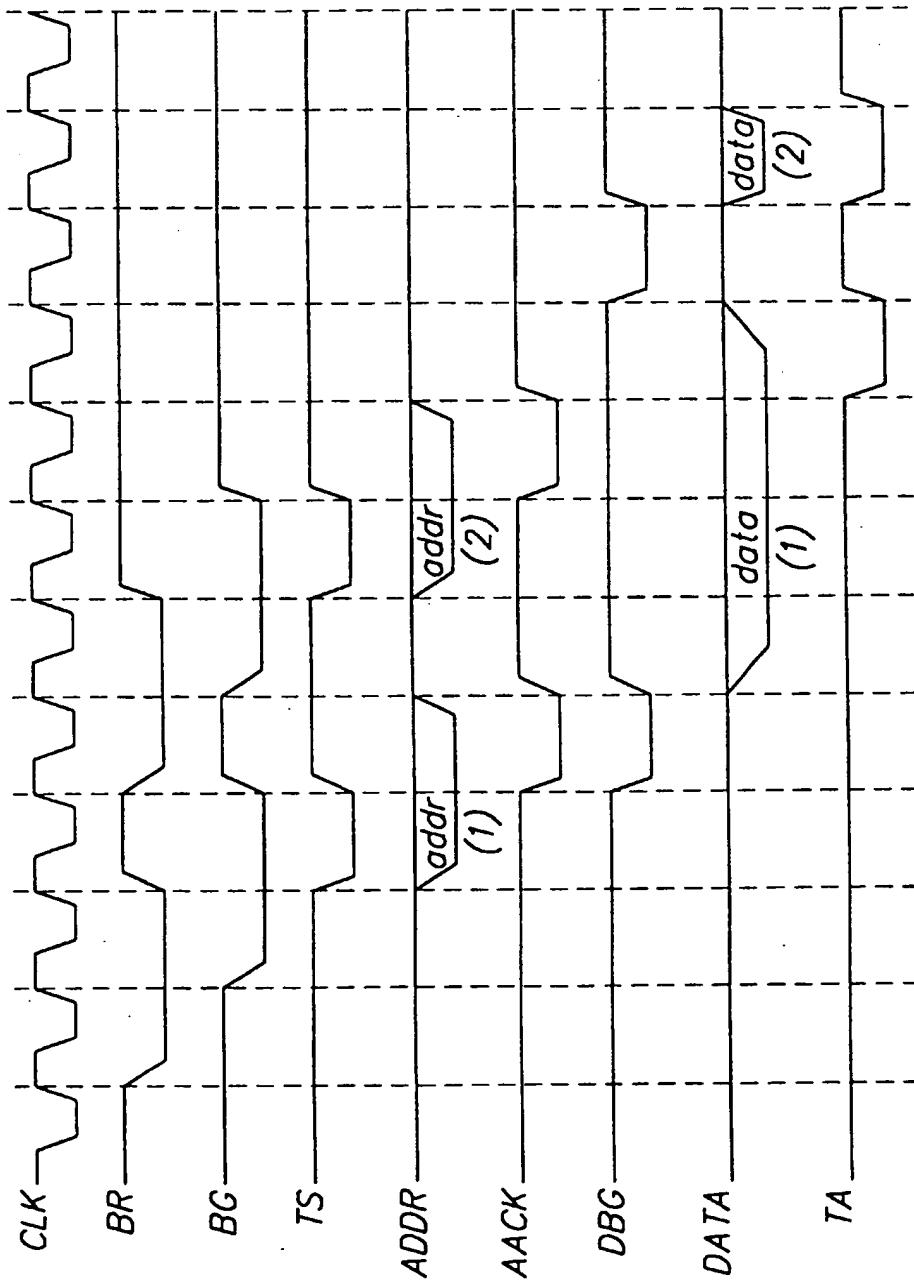


FIG. 4

APPROVED	J.G. FIG.
BY	
DRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A COMPUTER  
 SYSTEM HAVING UNORDERED SLAVES  
 Inventors: James D. Kelly et al.  
 Atty. Docket No.: 18602-06222  
 Sheet 5 of 21

FIGURE 5. Bus Segment

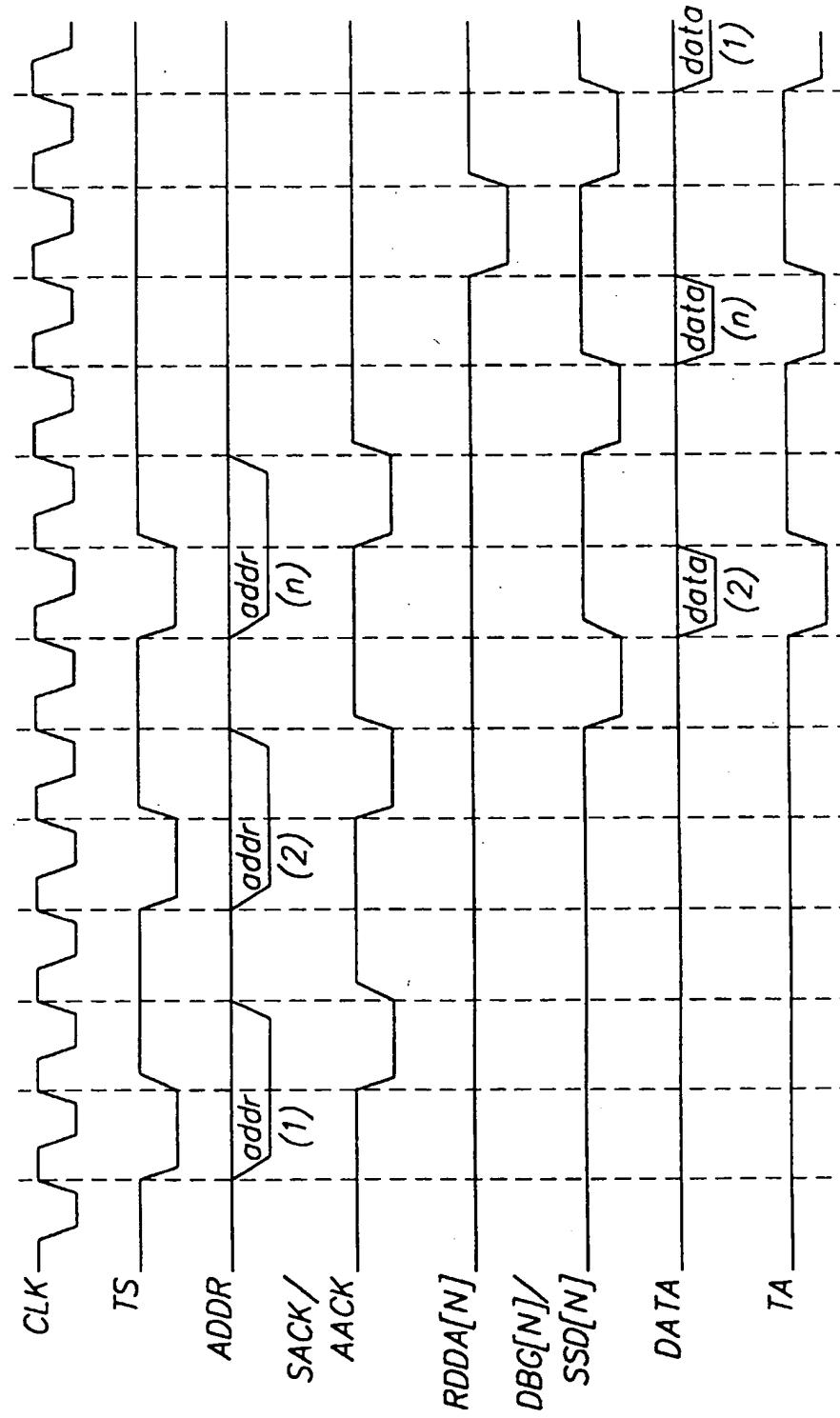


FIG. 5

APPROVED	D.G. FIG
BY	CLASE SUBCLASE
DRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A  
 COMPUTER SYSTEM HAVING UNORDERED  
 SLAVES  
 Inventors: James D. Kelly et al.  
 Atty. Docket No.: 18602-06222  
 Sheet 6 of 21

FIGURE 6 = FIGURE 6

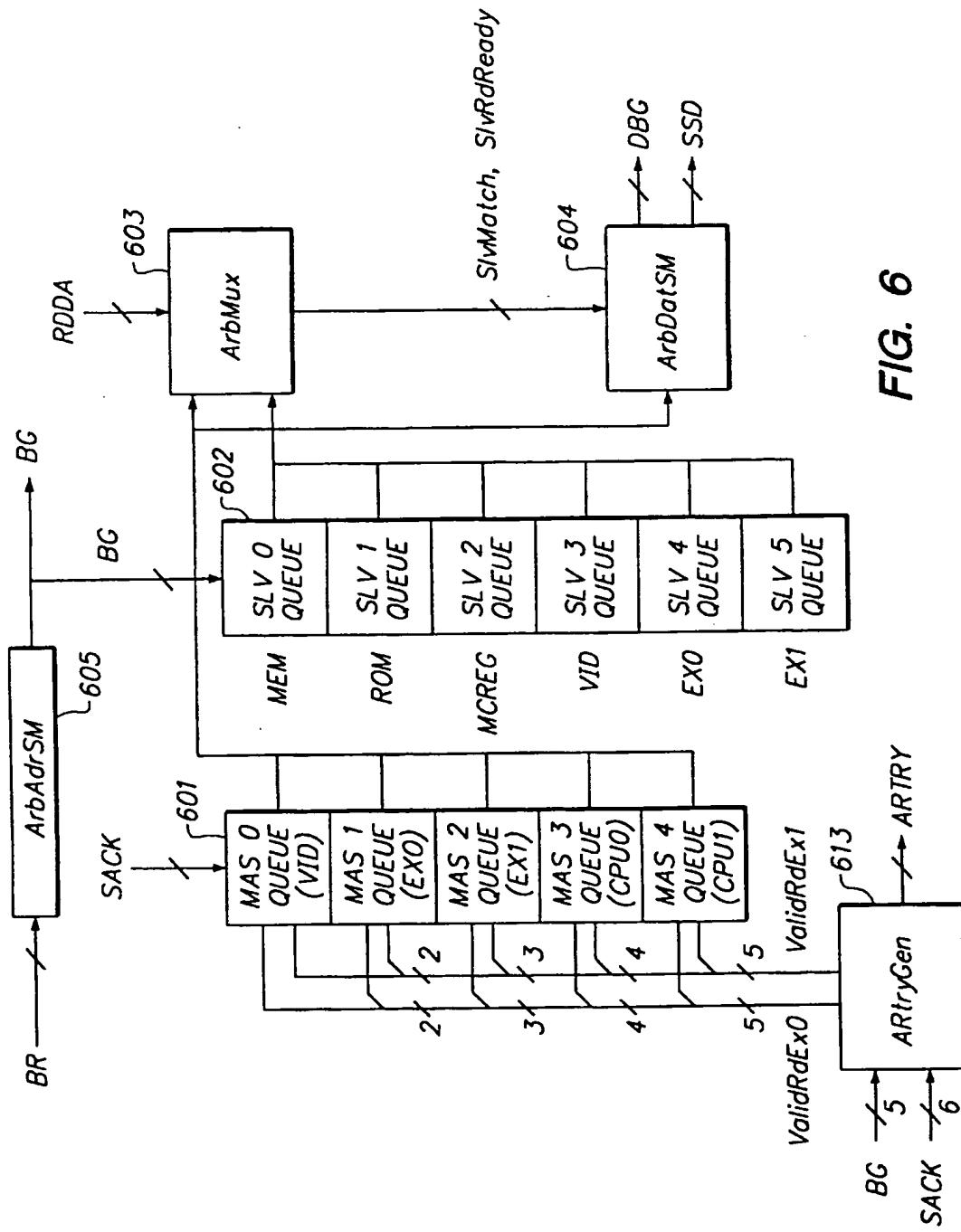


FIG. 6

APPROVED	D.G. PK
BY	
DRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A COMPUTER  
 SYSTEM HAVING UNORDERED SLAVES  
 Inventors: James D. Kelly *et al.*  
 Atty. Docket No.: 18602-06222  
 Sheet 7 of 21

P. DRAFT. N. = 0 E G 3 T U C H

FIG. 7

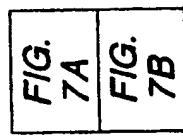
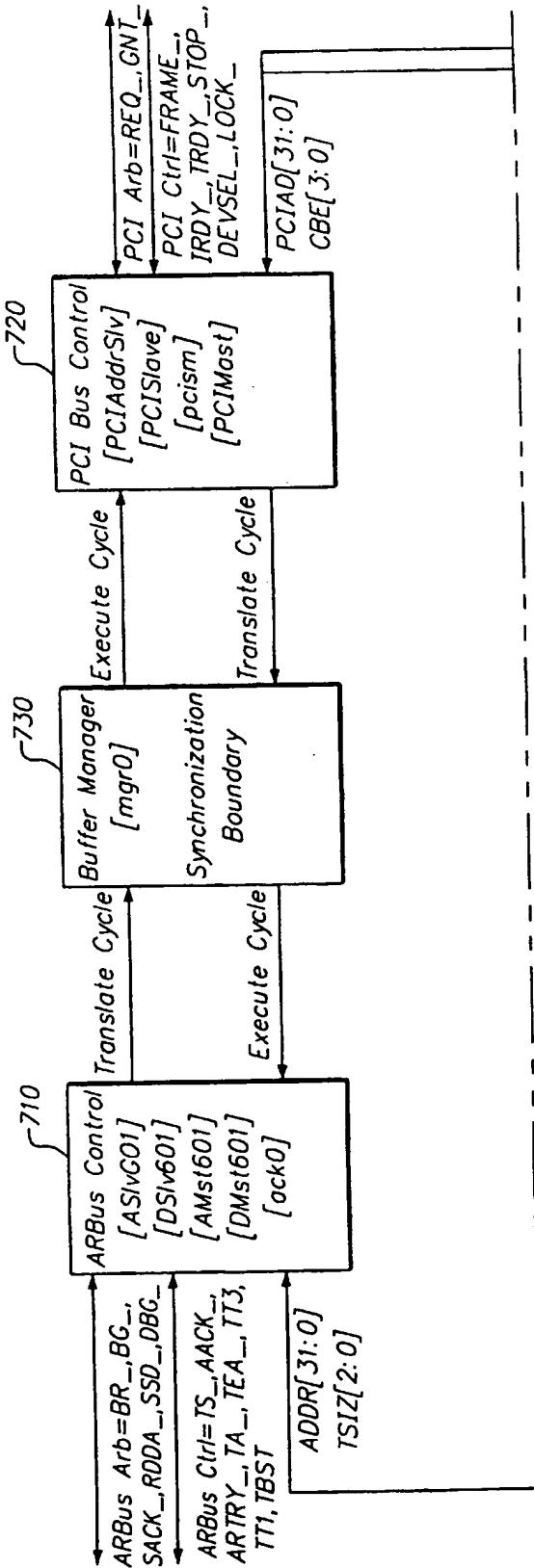


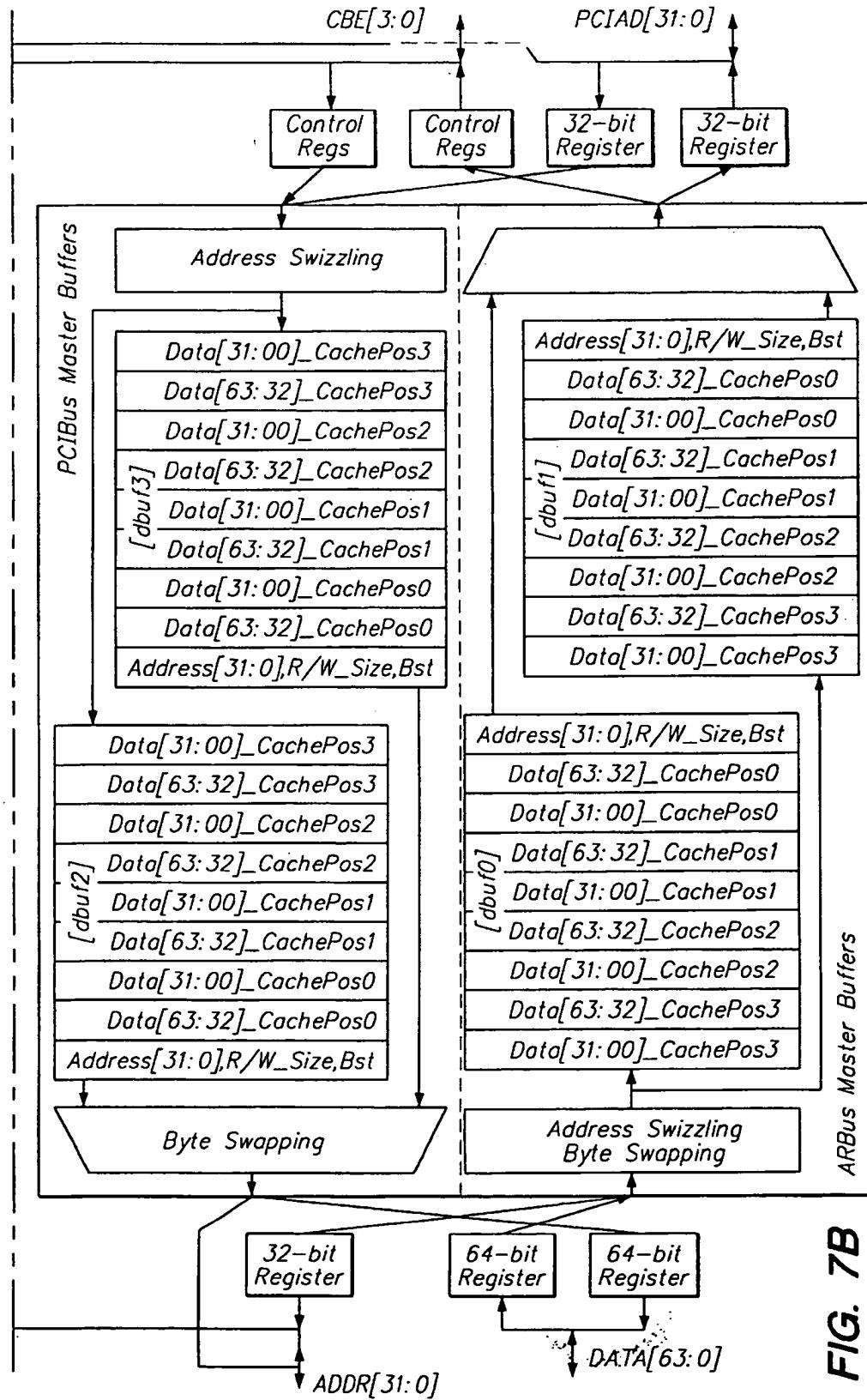
FIG. 7A



APPROVED **O.G. FIG.**  
BY  
DRAFTSMAN

Express Mail No. EL599912565US  
Application No. REI of 5,996,036  
Title: BUS TRANSACTION REORDERING IN A COMPUTER  
SYSTEM HAVING UNORDERED SLAVES  
Inventors: James D. Kelly et al.  
Atty. Docket No.: 18602-06222  
Sheet 8 of 21

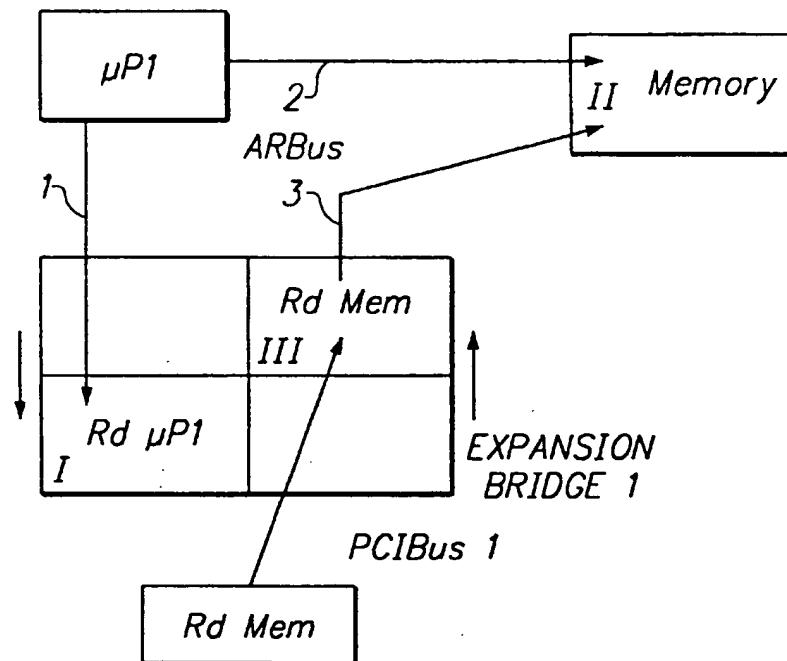
CONNECT = GENE CHART



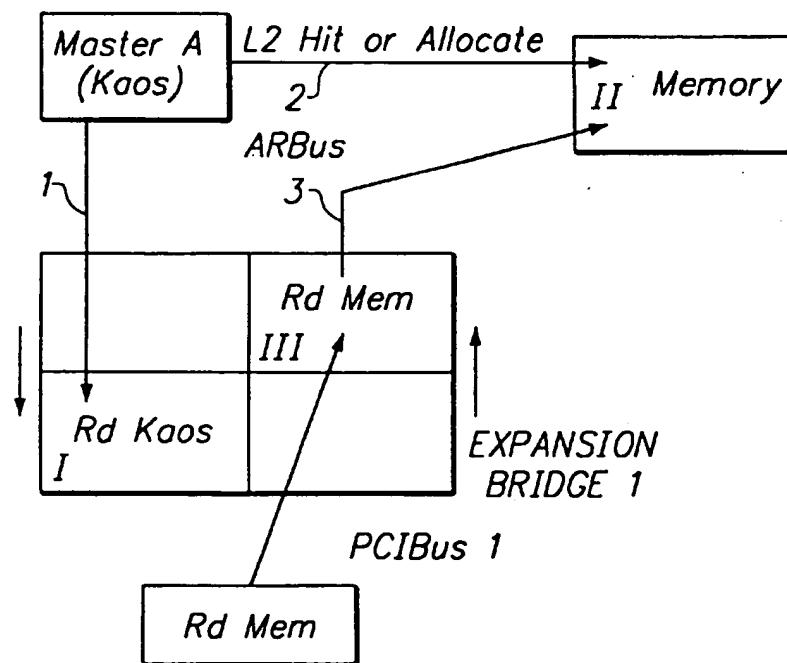
**FIG. 7B**

APPROVED **O.G. FIG.**  
BY  
DRAFTSMAN

Express Mail No. EL599912565US  
Application No. RE1 of 5,996,036  
Title: BUS TRANSACTION REORDERING IN A  
COMPUTER SYSTEM HAVING UNORDERED  
SLAVES  
Inventors: James D. Kelly *et al.*  
Atty. Docket No.: 18602-06222  
Sheet 9 of 21



**FIG. 8**



**FIG. 9**

APPROVED	O.C. FIG.
BY	CLASS SUBCLASSE
DRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A COMPUTER  
 SYSTEM HAVING UNORDERED SLAVES  
 Inventors: James D. Kelly *et al.*  
 Atty. Docket No.: 18602-06222  
 Sheet 10 of 21

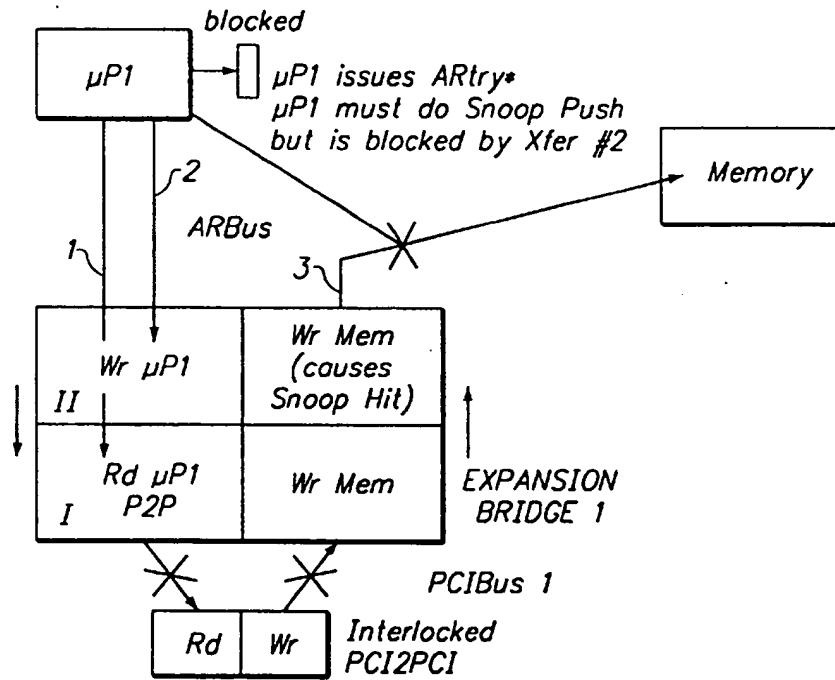


FIG. 10

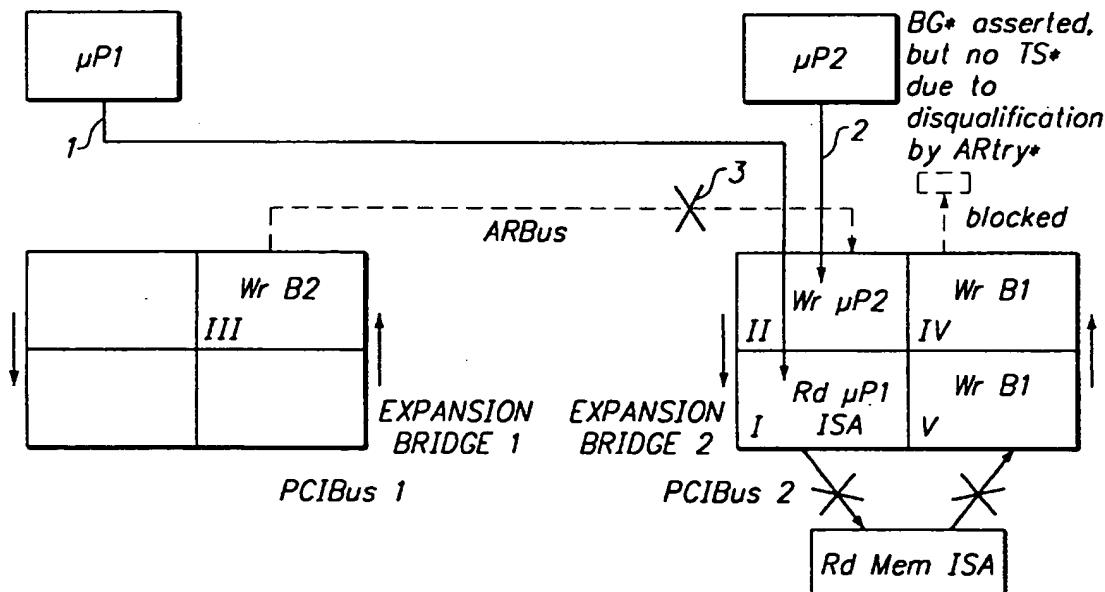
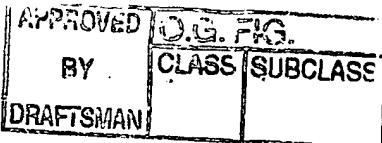
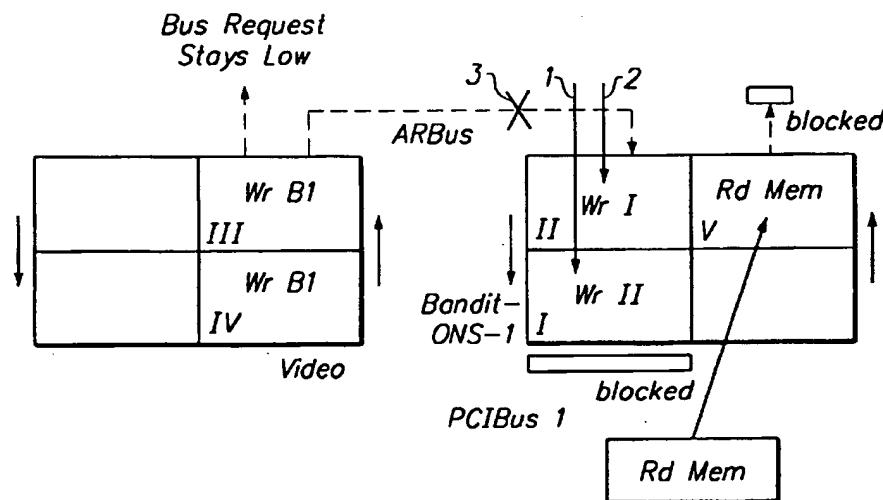


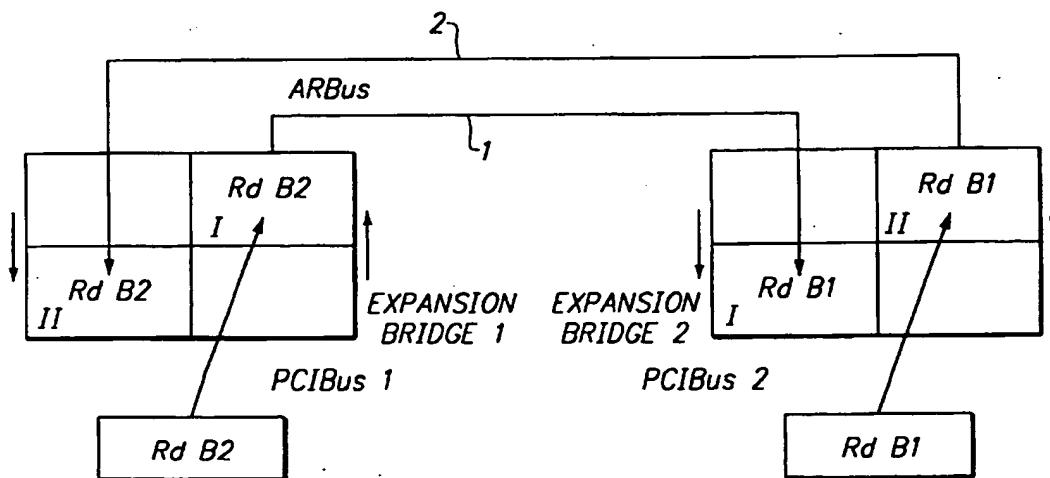
FIG. 11



Express Mail No. EL599912565US  
 Application No. RE1 of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A COMPUTER  
 SYSTEM HAVING UNORDERED SLAVES  
 Inventors: James D. Kelly et al.  
 Atty. Docket No.: 18602-06222  
 Sheet 11 of 21



**FIG. 12**



**FIG. 13**

APPROVED  
BY  
DRAFTSMAN

J.G. FIG  
CLASE SUBCLASE

Express Mail No. EL599912565US  
Application No. RE1 of 5,996,036  
Title: BUS TRANSACTION REORDERING IN A  
COMPUTER SYSTEM HAVING UNORDERED  
SLAVES  
Inventors: James D. Kelly *et al.*  
Atty. Docket No.: 18602-06222  
Sheet 12 of 21

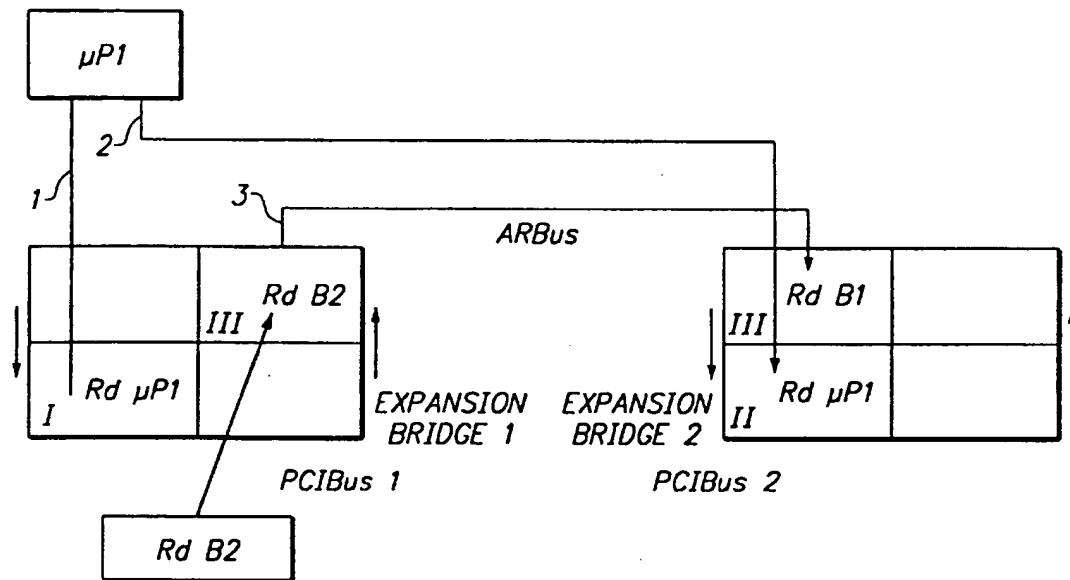


FIG. 14

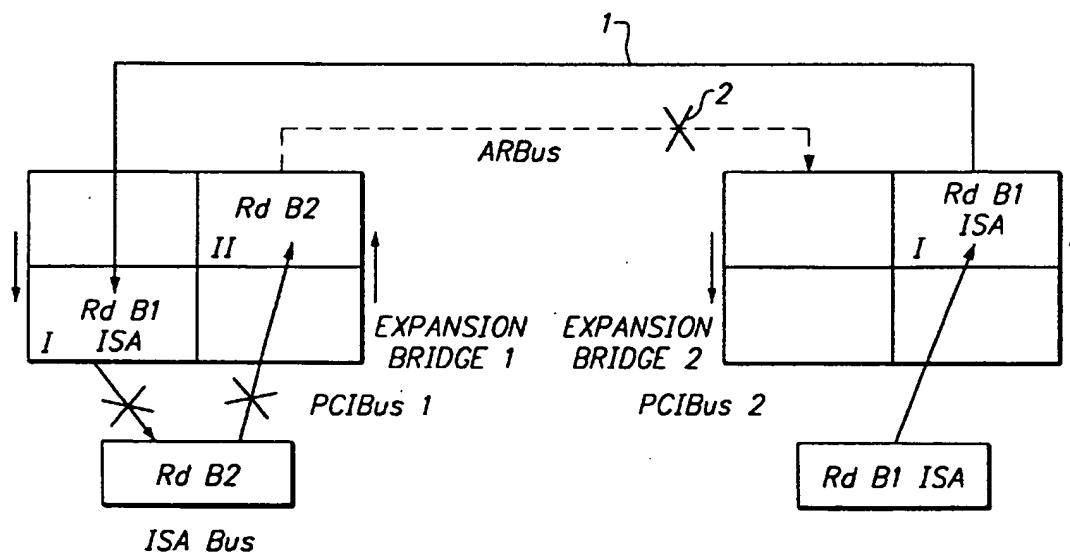
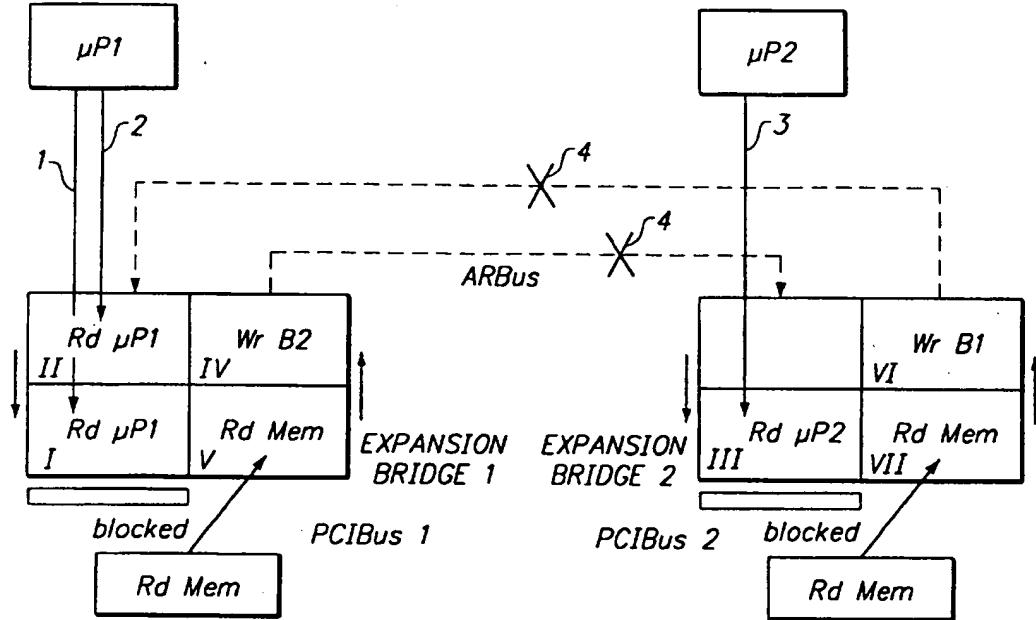


FIG. 15

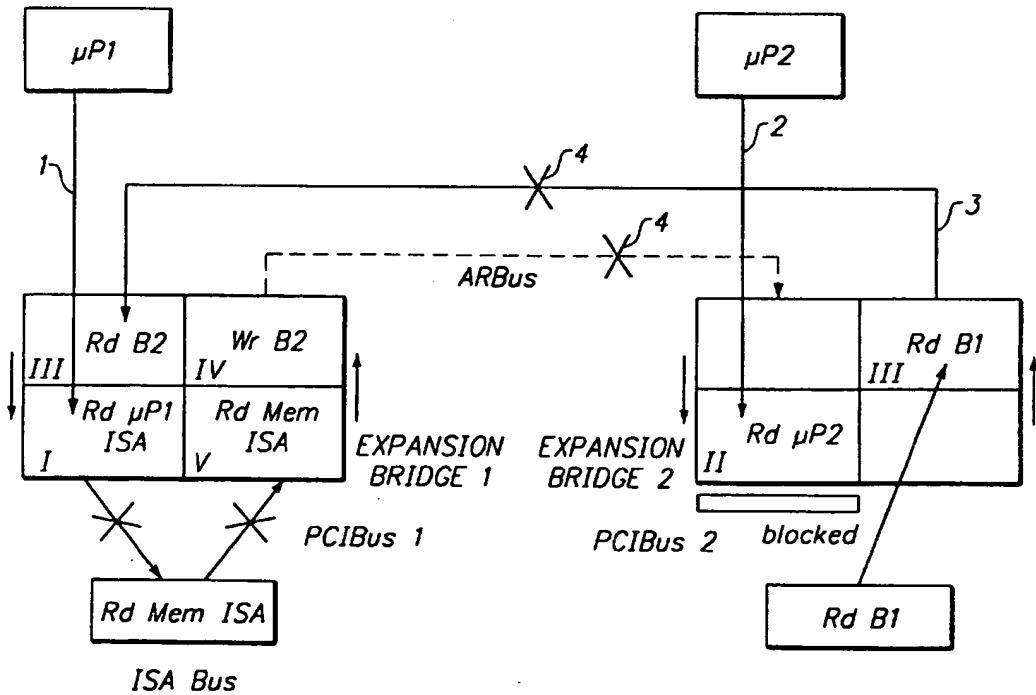
APPROVED	O.G. FIG.
BY	CLASS SUBCLASSE
DRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A COMPUTER  
 SYSTEM HAVING UNORDERED SLAVES  
 Inventors: James D. Kelly *et al.*  
 Atty. Docket No.: 18602-06222  
 Sheet 13 of 21

TOP SECRET - EYES ONLY



**FIG. 16**



**FIG. 17**

APPROVED	O.G. FIG.
BY	
DRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A COMPUTER  
 SYSTEM HAVING UNORDERED SLAVES  
 Inventors: James D. Kelly *et al.*  
 Atty. Docket No.: 18602-06222  
 Sheet 14 of 21

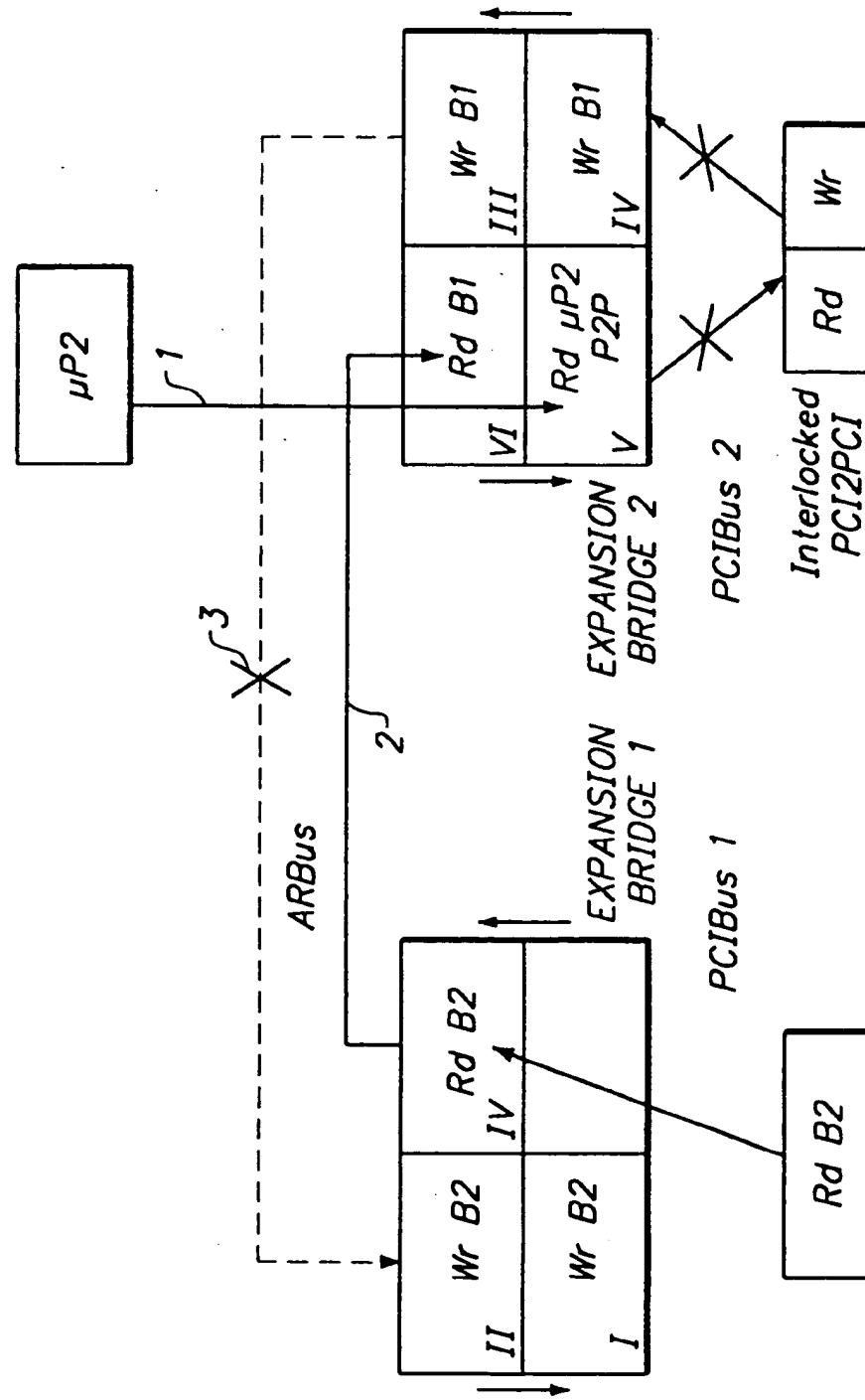


FIG. 18

APPROVED	J.G. FIG.
BY	CLASSE SUBCLASSE
DRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. RE1 of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A  
 COMPUTER SYSTEM HAVING UNORDERED  
 SLAVES  
 Inventors: James D. Kelly et al.  
 Atty. Docket No.: 18602-06222  
 Sheet 15 of 21

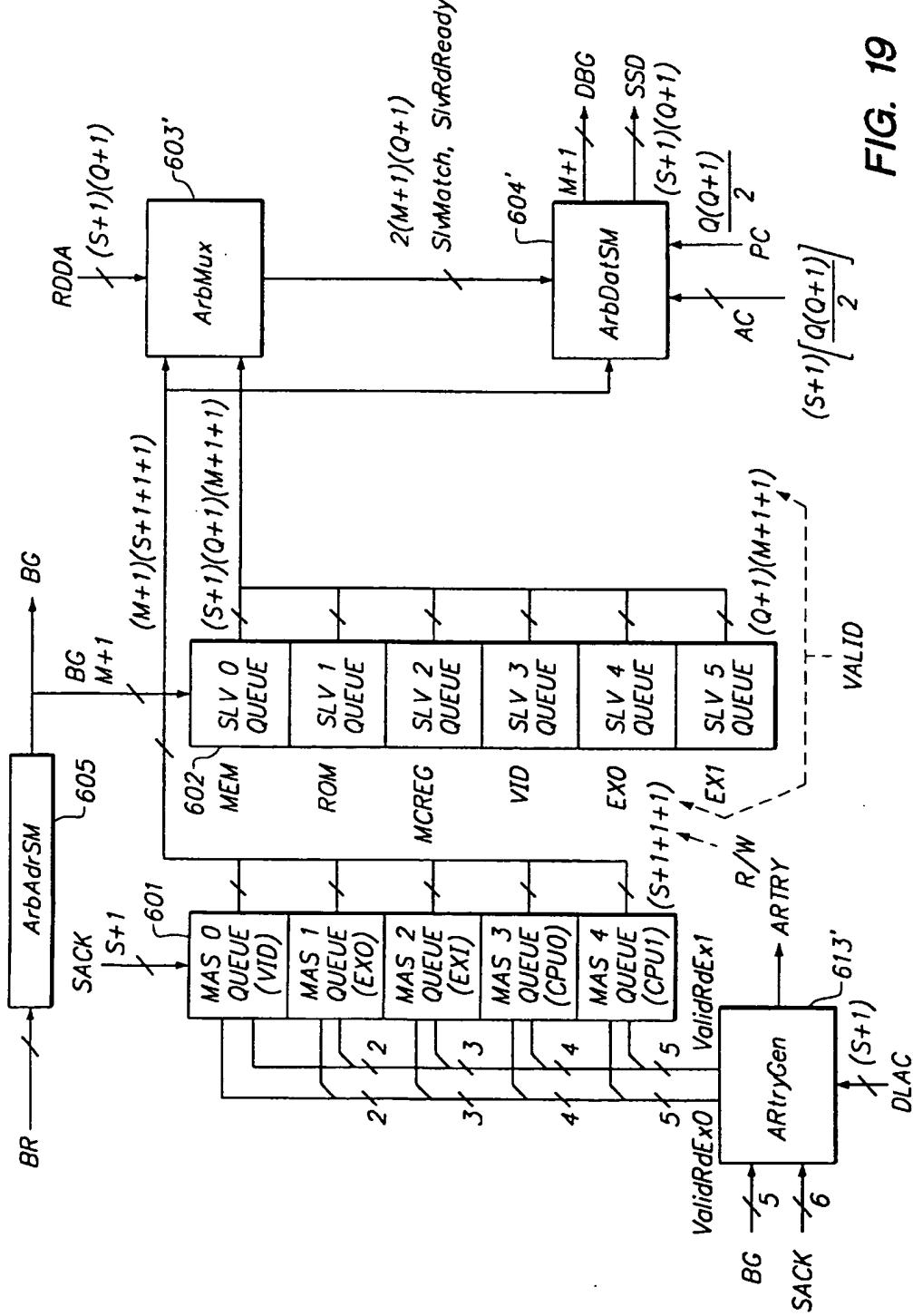


FIG. 19

APPROVED	J.G. FIG.
BY	
DRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A COMPUTER  
 SYSTEM HAVING UNORDERED SLAVES  
 Inventors: James D. Kelly *et al.*  
 Atty. Docket No.: 18602-06222  
 Sheet 16 of 21

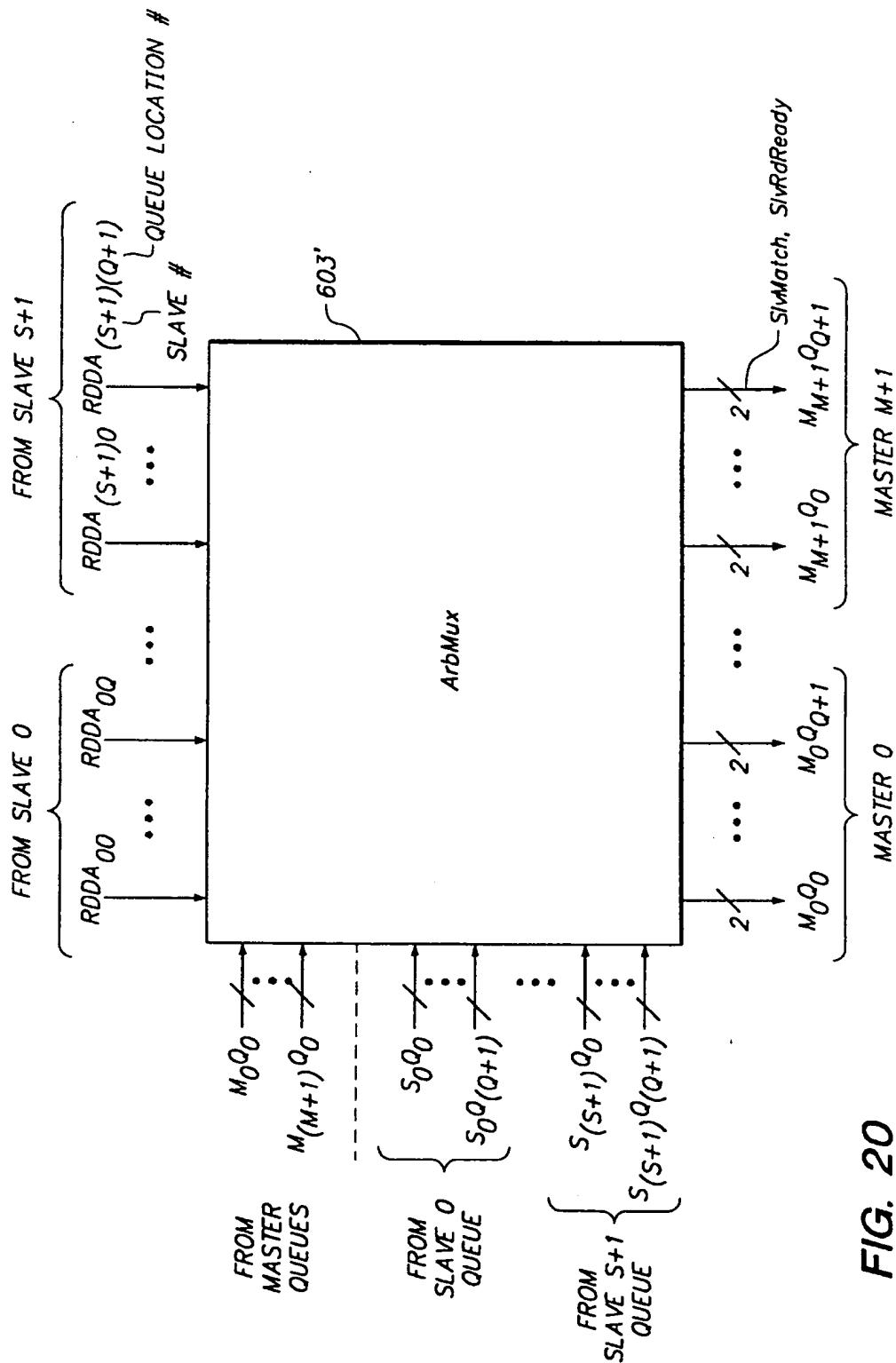


FIG. 20

APPROVED	D.G. FIG.
BY	CLASS SUBCLASSE
DRAFTSMAN	

Express Mail No. EL599912565US  
Application No. REI of 5,996,036  
Title: BUS TRANSACTION REORDERING IN A COMPUTER  
SYSTEM HAVING UNORDERED SLAVES  
Inventors: James D. Kelly *et al.*  
Atty. Docket No.: 18602-06222  
Sheet 17 of 21

FIG. 21

- 603 -

The diagram illustrates a 5x5 matrix multiplier architecture. It features a 5x5 grid of adder chains, each consisting of five 1-bit adders connected in a carry-chain configuration. The inputs to the first column of adders are labeled  $M_{00}^0$ ,  $M_{10}^0$ ,  $M_{20}^0$ ,  $M_{30}^0$ , and  $M_{40}^0$ . The inputs to the second column are  $S_{00}^0$ ,  $S_{10}^0$ ,  $S_{20}^0$ ,  $S_{30}^0$ , and  $S_{40}^0$ . The third column inputs are  $S_{00}^1$ ,  $S_{10}^1$ ,  $S_{20}^1$ ,  $S_{30}^1$ , and  $S_{40}^1$ . The fourth column inputs are  $S_{00}^2$ ,  $S_{10}^2$ ,  $S_{20}^2$ ,  $S_{30}^2$ , and  $S_{40}^2$ . The fifth column inputs are  $S_{00}^3$ ,  $S_{10}^3$ ,  $S_{20}^3$ ,  $S_{30}^3$ , and  $S_{40}^3$ . The outputs of the 5x5 grid are labeled  $RDDA_{00\ 11\ 02}$ ,  $RDDA_{10\ 11\ 12}$ ,  $RDDA_{20\ 21\ 22}$ ,  $RDDA_{30\ 31\ 32}$ ,  $RDDA_{40\ 41\ 42}$ , and  $RDDA_{50\ 51\ 52}$ . A central label "ArbMux" indicates the multiplexer used to select the appropriate input for each adder stage. The diagram also shows a feedback path from the output of the 5x5 grid back to the inputs of the first column of adders.

APPROVED	O.S. FIG.
BY	CLASS SUBCLASSE
DRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A  
 COMPUTER SYSTEM HAVING UNORDERED  
 SLAVES  
 Inventors: James D. Kelly et al.  
 Atty. Docket No.: 18602-06222  
 Sheet 18 of 21

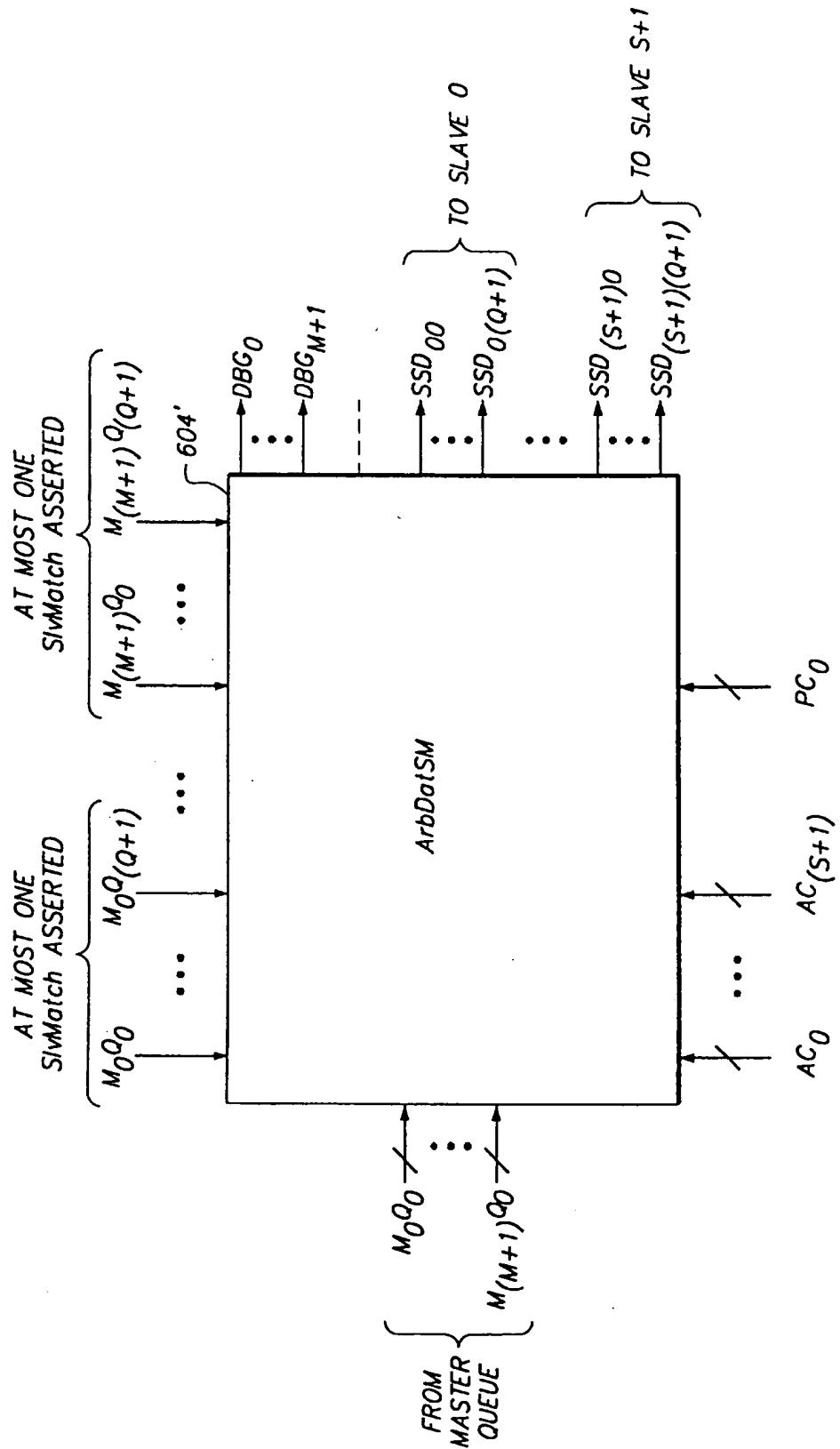


FIG. 22

APPROVED  
BY  
DRAFTSMAN

J.G. FKG.  
CLASS SUBCLASSE

Express Mail No. EL59991256US  
Application No. REI of 5,996,036  
Title: BUS TRANSACTION REORDERING IN A COMPUTER  
SYSTEM HAVING UNORDERED SLAVES  
Inventors: James D. Kelly et al.  
Atty. Docket No.: 18602-06222  
Sheet 19 of 21

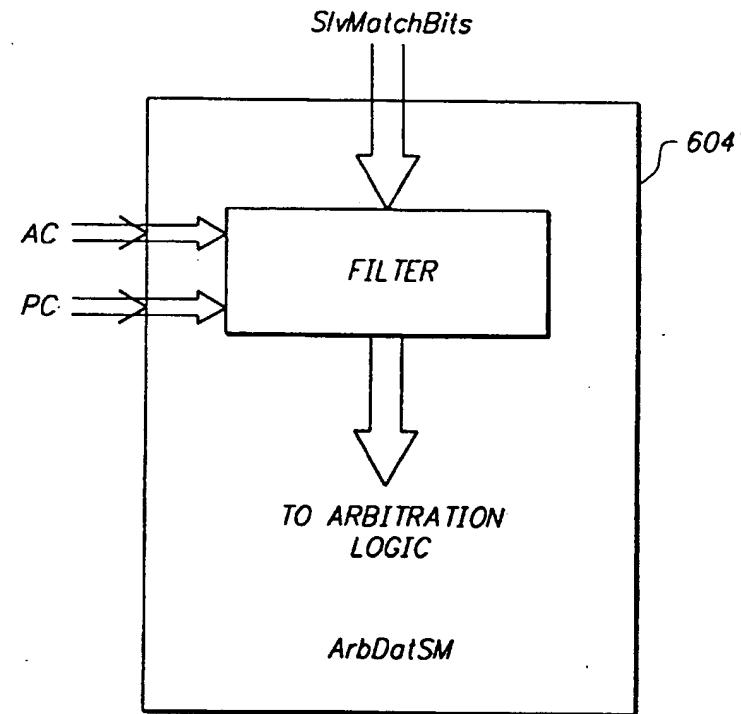


FIG. 23

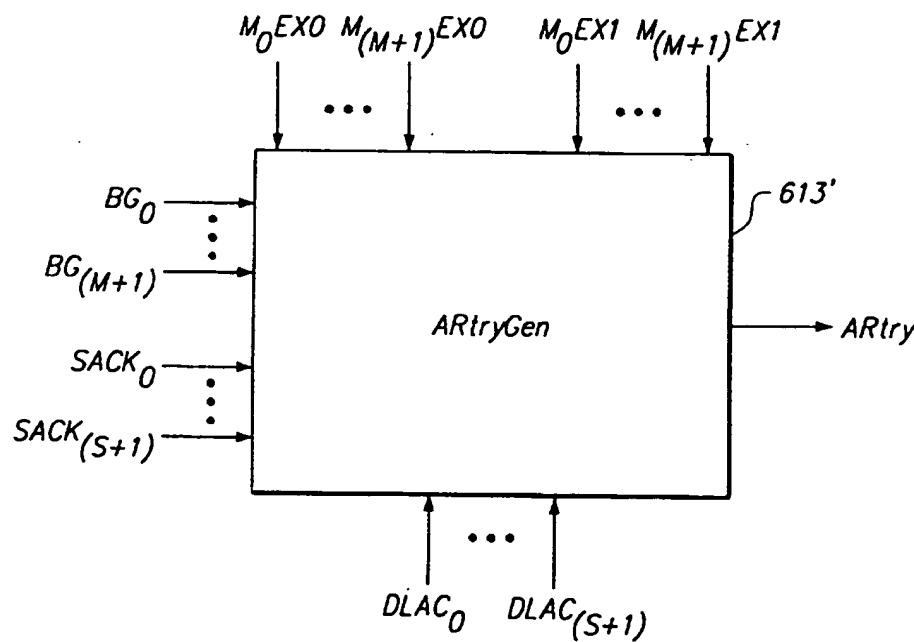


FIG. 25

RECEIVED	U.S. FIG.
BY	CLASS      SUBCLASS
CRAFTSMAN	

Express Mail No. EL599912565US  
 Application No. REI of 5,996,036  
 Title: BUS TRANSACTION REORDERING IN A COMPUTER  
 SYSTEM HAVING UNORDERED SLAVES  
 Inventors: James D. Kelly *et al.*  
 Atty. Docket No.: 18602-06222  
 Sheet 20 of 21

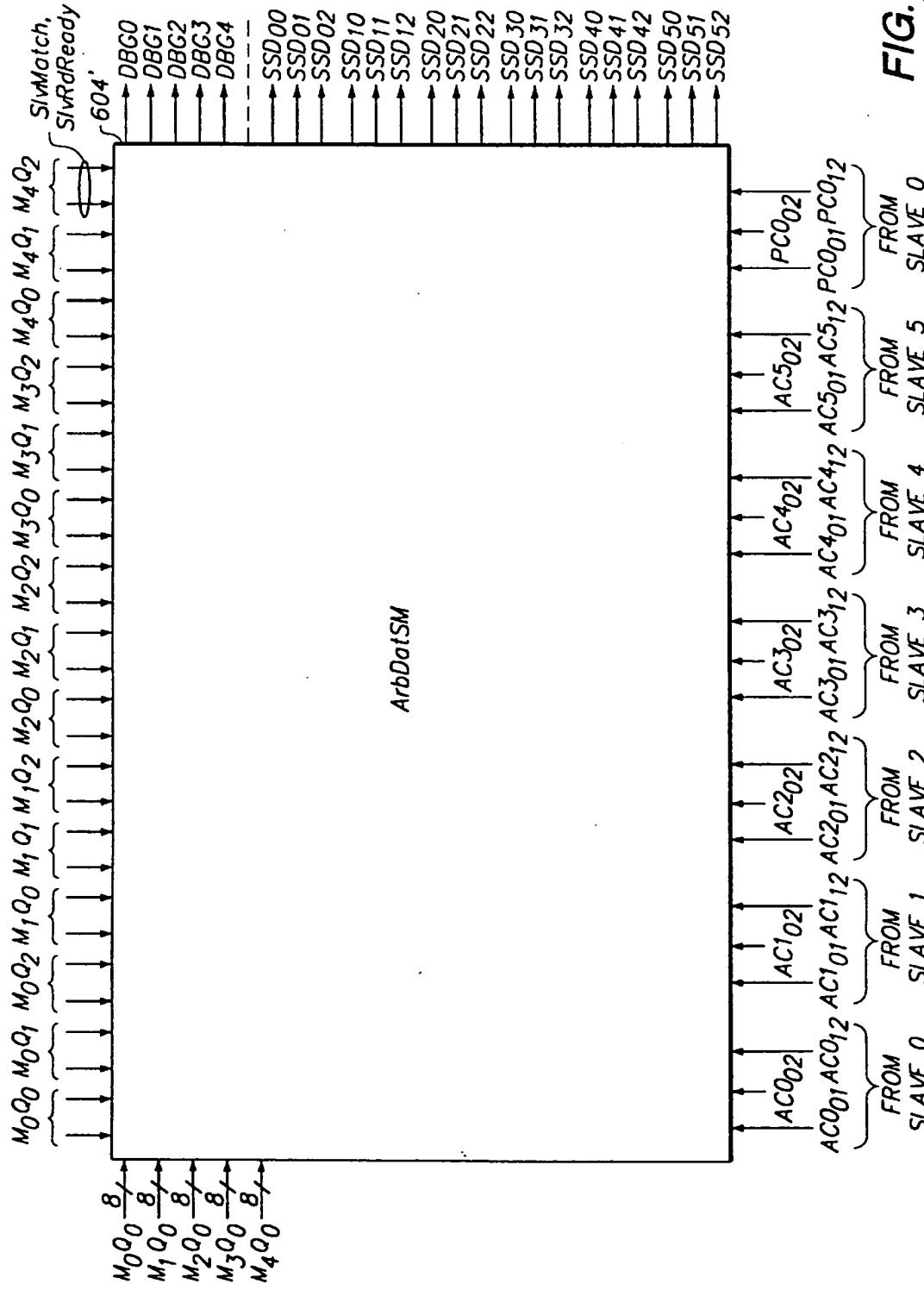


FIG. 24

APPROVED  
BY  
DRAFTSMAN

O.G. FIG.  
CLASS SUBCLASSE

Express Mail No. EL599912565US  
Application No. RE1 of 5,996,036  
Title: BUS TRANSACTION REORDERING IN A  
COMPUTER SYSTEM HAVING UNORDERED  
SLAVES  
Inventors: James D. Kelly *et al.*  
Atty. Docket No.: 18602-06222  
Sheet 21 of 21

